

REMARKS

The application has been reviewed in light of the Office Action mailed on December 29, 2006. Claims 7-13 are currently pending in the application, with claims 7 and 11 being in independent form. By the present Amendment, claims 7 and 11-13 have been amended. Support for the amendments is found at least in paragraphs 28-33 and Figures 1-4 of the specification. Claims 1-6 have been canceled. It is respectfully submitted that the claims pending in the application, namely claims 7-13 are patentable over the prior art.

The present invention is directed to a liquid crystal display panel member formed by bonding together a first substrate and a second substrate. Liquid crystal is sealed in a gap between the first substrate and the second substrate. The member comprises an image display cell and a dummy cell. Both the image display cell and the dummy cell are filled with liquid crystal. An image is displayed by the liquid crystal on the image display cell. The image display cell is formed on a substantial center portion of the first and second substrates. The dummy cell is formed in a periphery of the image display cell. The dummy cell is used for inspecting a state where the liquid crystal is sealed. The dummy cell does not display an image. The dummy cells may be cut out.

Rejection of Claims 7-13 under 35 U.S.C. § 102(e)

Claims 7-13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Tashiro et al (U.S. Patent Application Publication No. 2006/0176439 A1), hereinafter "Tashiro". Claim 7 has been amended in a manner believed to overcome the rejection. In particular, claim 7 has been amended to recite "the dummy cell having the liquid crystal sealed therein". Support for this amendment is found at least in paragraphs 28-33 and Figures 1-4 of the specification. It is respectfully submitted that the recitation of amended claim 7 is patentable over Tashiro. Tashiro

does not disclose or suggest “the dummy cell having the liquid crystal sealed therein.” (see claim 7). Referring to paragraphs 434-435 and Figure 90a, Tashiro only discloses forming display area 10 on array substrate 16, forming sealing material 6 in rectangular frame-shape in the periphery of the display area 10 and forming six rectangular frame-shape sealing materials 346-1 through 346-6 having a definite space inside the frame in the external periphery of the sealing material 6. Liquid crystal is dropped only on the display area 10 inside the sealing material 6. Liquid crystal is not dropped inside the frames of the sealing materials 346-1 through 346-6. Sealing materials 346-1 through 346-6 function as suction cups and prevent the substrate from shifting. Sealing materials 346-1 through 346-6 are not dummy cells filled with the liquid crystal.

Regarding claim 11, Tashiro does not disclose or suggest “an image display cell formed on a substantial center portion of the first and second substrates” and “a plurality of dummy cells having liquid crystal sealed therein and having areas different from one another, the dummy cells being formed in a portion other than a portion of the image display cell” (see claim 11).

Referring to paragraphs 424-428 and Figures 88a-88b, Tashiro only discloses a liquid crystal display which can suppress irregularities in cell gap if the amount of liquid crystal drops at instillation in the cell process is not accurate. A convex-type structure 298 for defining a cell gap is provided on the array substrate 16 in frame shape inside the sealing material 6 and outside the display area 10. A convex-type structure 300 for defining a cell gap is also provided on the CF substrate 4 in frame shape inside the sealing material 6 and outside the display area 10. Convex-type structure 300 faces the convex-type structure 298 on the array substrate 16.

Liquid crystal 184 is dropped inside the convex-type structure 298 on the array substrate 16. Liquid crystal 184 is more than the amount required to fill inside the display area 10 and less than the amount required to fill inside the sealing material 6. Substrate attachment is then

performed by bringing the array substrate 16 and the CF substrate 4 closer together. As the front end portion of the sealing material 6 on the array substrate 16 side contacts with the CF substrate 4, a space still exists between the convex-type structures 298 and 300. Excess liquid crystal 184' overflowing from the display area 10 is drained to an air gap 94 (304 in Figure 88b) in a gap portion 93 (302 in Figure 88b) between the sealing material 6 and the convex-type structures 298 and 300. Both of the front end portions of the convex-type structures 298 and 300 are closely adhered and a predetermined cell gap is decided by the sum of the heights of both structures. The array substrate 16 and the CF substrate 4 are pressurized toward each other by the heights of the convex-type structures 298 and 300 even if the amount of liquid crystal is not accurate. Air gap 94 (304) is not used for inspection.

Claims 11-12 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Jung et al (U.S. Patent Application Publication No. 2004/0105065 A1), hereinafter "Jung". Claims 11-13 have been amended in a manner believed to overcome the rejection. In particular, claims 11-13 have been amended to include the limitation of "dummy" cells. Support for these amendments is found at least in paragraphs 28-33 and Figures 1-4 of the specification. It is respectfully submitted that the recitations of amended claims 11-13 are patentable over Jung.

Jung does not disclose or suggest "an image display cell formed on a substantial center portion of the first and second substrates" and "a plurality of dummy cells having liquid crystal sealed therein and having areas different from one another, the dummy cells being formed in a portion other than a portion of the image display cell." (see claim 11). Jung only discloses a plurality of LCD panels having a first size and second size smaller than the first size disposed within the same base substrate to optimize use of the base substrate (paragraphs 77-78). All of

the LCD panels are display devices unlike the plurality of dummy cells. None of the LCD panels are used to check the quality of panel.

Accordingly, claims 7 and 11 are believed to be patentable over Tashiro and claim 11 is believed to be patentable over Jung. Therefore, reconsideration and withdrawal of the rejection with respect to these claims is respectfully requested and allowance of these claims is earnestly solicited.

Claims 8-10 depend directly or indirectly from independent claim 7 and claims 12-13 depend directly from claim 11 and are therefore patentable for at least the reasons given hereinabove.

Applicant respectfully requests that the rejection of these claims be withdrawn and allowance of these claims is earnestly solicited.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully submits that all claims now pending in this application, namely Claims 7-13 are now in condition for allowance. Accordingly, early and favorable consideration of this application is respectfully requested. Should the Examiner believe that a telephone or personal interview may facilitate resolution of any remaining matters, he is respectfully requested to contact Applicant's undersigned attorney at the telephone number indicated below.

No fee is believed to be due for the submission of this amendment. If any fees are required, however, the Commissioner is authorized to charge such fees to Deposit Account No. 09-0458.

Respectfully Submitted,

/Joseph J. Petrokaitis/
Joseph J. Petrokaitis
Reg. No. 38,995
Attorney for Applicant
Phone: (845) 894-3363

International Business Machines Corporation

D/18G, B/321, Zip 482
2070 Route 52
Hopewell Junction, NY 12533
Phone: (845) 894-3363
Fax: (845) 892-6363